

REMARKS

The Office Action of November 6, 2003 presents the examination of claims 1-7. The present paper cancels claim 2, amends claims 1, 4, and 6, and adds claims 8-21.

Support for amendments

The majority of the amendments made herein are merely of a grammatical or formal nature. The amendment to claim 1, and the recitation in claim 9, that the angle  $\beta$  defines the angle between the innermost butt-joint and the outermost butt-joint is supported by Figure 2B and the last paragraph on page 7 through line 4 of page 8. The description of the angle  $\alpha$  between two adjacent butt-joints is provided in the same part of the specification. The numerical limits upon these two angles recited in claims 1, 9 and 13-21 are set forth at page 8, lines 1-7.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, for various reasons as set forth at page 2 of the Office Action. Claim 1 is amended to recite final steps that are linked to earlier steps in the manner suggested by the Examiner. Claim 2 is canceled. In claim 6, the awkward phrasing and typographical errors are corrected.

Rejections over prior art

Claims 1-3, 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Katagiri '116, Yoshida '610 or Kumagai '959 in view of Minami '343 and/or Smithkey '039. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Applicant submits that the Examiner fails to establish *prima facie* obviousness of the invention as presently claimed. In particular, the recitation that the angle  $\beta$ , which encompasses the joints between the laminate layers, is to be less than 180 degrees (claim 1) is not described or suggested by the cited references.

The Examiner takes a position that it is not possible for the circumferential separation of the joints to be greater than 180 degrees, and therefore this limitation is meaningless. Applicant has addressed this by clarifying that the angle intended is that defined as  $\beta$  in the specification. The Examiner can clearly see that, while true that any two joints cannot be more than 180 degrees apart, the angle that encompasses all of the joints,  $\beta$ , can include the entirety of the circumference in the instance where the outermost joint is aligned with the innermost joint.

The combined references cited by the Examiner do not describe or suggest any instance in which  $\beta$  is restricted to less than 180 degrees. Thus, if the references are combined in the manner suggested by the Examiner, the present invention is not obtained.

Accordingly, the combined references fail to establish *prima facie* obviousness of the invention and the instant rejection should be withdrawn.

Furthermore, Katagiri, the reference cited for any suggestion of a numerical limit upon an angle, shows  $\beta$  of 240 degrees. Thus, the combination including Katagiri even teaches away from the present invention. For this further reason the combined references fail to establish *prima facie* obviousness of the invention and the instant rejection should be withdrawn.

For the same reasons, the instant rejection does not apply to the new claims 8-21.

Claims 1-4, 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Riggs '104 in view of Costemalle et al. '438. Claims 1-4, 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deist '573. Claims 1-4, 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ragan '714 in view of Deist '573. Claims 1, 2 and 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Harsel '855 or Wild '578 in view of Deist '573.

All of the above rejections fail for the same reason as the first. That is, the cited combination of references fails to establish *prima facie* obviousness of the invention for the same reasons that that combination of Katagiri, Yoshida, Kumagai, and Minami or Smithkey fail to establish *prima facie* obviousness of the

invention. Accordingly, all of these rejections should also be withdrawn.

The present application well-describes and claims patentable subject matter. The favorable action of allowance of the pending claims and passage of the application to issue is respectfully requested.

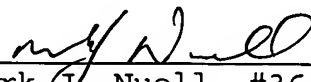
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark J. Nuell (Reg. No. 36,623) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application. The required fee of \$950.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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